

REMARKS

Favorable reconsideration and withdrawal of the objection and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Title

The title has been objected to as not being descriptive. In response, a new title, which is more clearly indicative of the claimed invention, is presented herein for the Examiner's consideration and approval.

Claims Status

Claims 1 through 17, 20 through 31, 33 through 37, 39, and 40 remain pending in the application. Claims 18, 19, 32, and 38 have been canceled. Claims 1, 2, 10, 20, 21, 23 through 25, 28, 29, 33, 34, 36, 37 and 39 have been amended to even more succinctly define the invention and/or to improve their form. It is respectfully submitted that no new matter has been added. Claims 1, 10, 20, 23, 28, 33, and 36 are the only independent claims pending in the application.

Section 112 Rejection

Claims 1 through 40 are rejected under 35 U.S.C. § 112, second paragraph, for the reasons set forth in the Official Action.

In response, Claims 1, 2, 10, 20, 21, 23 through 25, 28, 29, 33, 34, 36, 37, and 39 have been amended *inter alia* to address the grounds of the rejection. It is respectfully submitted that the amended claims are in full compliance with the statute and that the rejection has been overcome.

Art Rejections

Claims 1, 7, 8, 10, 11, 20, 22-24, 26-28, 32-33, 35-36 and 39-40 were rejected under 35 U.S.C. § 103 as being unpatentable over Takahashi, JP 07-248677, in view of Tsuchiya, JP 2003-76131.

Claims 18-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi, et al. in view of Tsuchiya, and further in view of Isobe, et al., U.S. Patent 6,704,521.

The rationale underlying the foregoing art rejections is succinctly set forth in the Official Action.

Response to Art Rejections

The rejections are respectfully traversed.

Amended Claim 1 is directed to an image forming apparatus including: a first developing agent storing section which stores toner; a toner replenishing member for supplying the toner in the first developing agent storing section to a second developing agent storing section; a density detector for detecting a toner density in the second developing agent storing section; a detecting section for detecting information relating to fluidity of the toner; a use amount detector for detecting information relating to an amount of toner used in the first developing agent storing section; a storage section for storing information relating to a toner replenishing amount in accordance with the information relating to fluidity of the toner detected by the detecting section and the information relating to the amount of toner used detected by the toner amount detector; and a controller which controls operation of said toner replenishing member on the basis of information

relating to the toner density from said density detector and the information relating to the toner replenishing amount.

The claimed apparatus uses information relating to toner density and information relating to a toner replenishing amount (in accordance with the information relating to fluidity of the toner and the information relating to the amount of toner used) to control a toner replenishing member. Accordingly, the toner in the first developing agent storing section is accurately supplied to a second developing agent storing section. Thus, the claimed invention assures reliable toner replenishment and high quality image formation.

Amended independent Claims 10, 20, and 23 define an invention featuring a toner replenishing operation, which uses information relating to a detected toner density and information relating to a toner replenishing amount (Claim 10); or information relating to an amount of toner used and information relating to fluidity of the toner (Claims 20 and 23).

Amended independent Claim 28 is directed to an image forming apparatus which has a detachable cartridge including a first developing agent storing section which stores toner, a toner replenishing member for supplying the toner in the first developing agent storing section to an image forming section, a storage section which stores information relating to the toner, comprising: an image forming section; a controller which controls operation of the toner replenishing member on the basis of information relating to toner replenishing amount according to information relating to an amount of toner used in the first developing agent storing section detected by use amount detector and information relating to an environment in a main body of the apparatus detected by a environment detector, stored in said storage section.

The claimed apparatus uses information relating to toner replenishing amount (according to information relating to an amount of toner used in the first developing agent storing section and information relating to an environment in a main body of the apparatus to control the toner replenishing member) so that the toner in the first developing agent storing section is accurately supplied to the image forming section. Accordingly, the claimed invention assures reliable toner replenishment and the high quality image forming.

Independent Claims 33 and 36 define an invention featuring information relating to an amount of toner used and information relating to an environment in a main body of an image forming apparatus.

The Examiner notes that the image forming apparatus of Takahashi, et al. includes a developing agent storing section which stores toner, a toner replenishment member, a controller which controls operation of the toner replenishment member on the bases of information relating to an amount of toner used in the developing agent storing section. However, Takahashi, et al. only discloses an apparatus that controls toner supply on the basis of detected toner density in a developing device.

The Examiner asserts the image forming apparatus of Tsuchiya controls operation of the toner replenishment member on the basis of information relating to an amount of toner used in the developing agent storing section and information relating to fluidity of the toner. However, Tsuchiya only discloses an apparatus that controls an amount of toner supplied according to detected toner density information and detected humidity information.

Isobe, et al. discloses a process cartridge with a memory and computer program housing a control method. However, Isobe, et al. merely discloses a toner cartridge having

memory in which history data of the toner cartridge is stored. Isobe, et al. does not disclose or suggest storing information relating to an amount of toner used in the first developing agent storing section for operation of the toner replenishing member.

Takahashi, et al., Tsuchiya, and Isobe, et al. do not disclose or suggest a feature of the present invention according to amended independent Claims 1, 10, 20 and 23.

Specifically, there is no disclosure in these references of the storage or memory for storing information relating to a toner replenishing amount in accordance with the information relating to fluidity of the toner and the information relating to the amount of toner used, and a control of the toner replenishing member by using information relating to toner density and information relating to a toner replenishing amount, so that the toner in first developing agent storing section is accurately supplied to a second developing agent storing section.

Furthermore, Takahashi, et al., Tsuchiya, and Isobe, et al. do not disclose or suggest a feature of the present invention according to amended independent Claims 28, 33 and 36. Specifically, there is no disclosure in these references of a storage or memory section storing information relating to toner replenishing amount according to information about an amount of toner used and information about an environment in a main body of the apparatus, and a control of the toner replenishing member by using information relating to toner replenishing amount, so that the toner in the first developing agent storing section is accurately supplied to the image forming section.

It is also respectfully submitted that the combination rejections are not well founded. The Examiner has provided a *rationalization* for combining the teachings of the cited art based on the benefits of doing so. A combination rejection is proper only when

there is some suggestion or motivation in the cited art *per se* to cause one having ordinary skill in the art to combine the teachings of the cited art. There is nothing in the cited art which supports the position that it can be combined in the manner suggested. Even if the art could be so combined, the mere fact that the art can be combined is not sufficient if there is no suggestions in the art that such a combination is desirable. For example, see ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

In view of the foregoing, it is respectfully submitted that independent Claims 1, 10, 20, 23, 28, 33, and 36 are allowable over the cited art whether taken individually or in combination.

Accordingly, it is respectfully submitted that independent Claims 1, 10, 20, 23, 28, 33, and 36 are allowable over Takahashi, et al., Tsuchiya, and Isobe, et al. whether taken individually or in combination.

Dependent Claims

Claims 7, 11, 22, 24, 26, and 27 are dependent on claims 1, 10, 20, and 23, respectively.

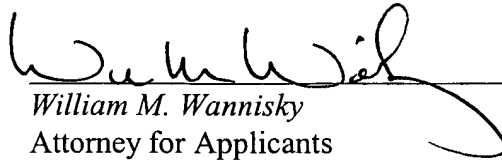
Claims 35, 39, and 40 are dependent on Claims 33 and 36, respectively. Claims 18, 19, and 32 have been canceled.

Closing Comments

It is respectfully submitted that the claims on file are allowable over the art of record and that the application is in condition for allowance. Favorable reconsideration and early passage to issue of the present application are earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,



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